

Appln No. 09/928,108
 Amdt. Dated March 22, 2006
 Response to Office Action of January 25, 2006

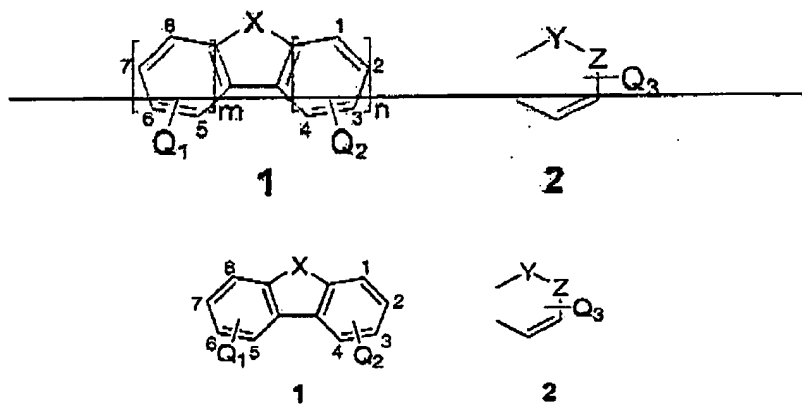
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An infrared dye wherein the dye comprises a molecule of the formula 1



~~wherein m and n are the number of fused 6-membered aromatic rings connected to each side of the central moiety such that the first 6-membered aromatic ring, if present, is connected as shown in 1; and~~

wherein Q_1 and Q_2 are one of the same or different fused rings shown as 2 whereby one ring shown as 2 is connected at any of the two adjoining positions C_1 to C_4 at any orientation and another ring shown as 2 is connected to any of the two adjoining positions C_5 to C_8 at any orientation of the outer aromatic rings shown in 1 which may also include one or many substituents individually selected from the group consisting of R_1 , a fused 5-membered ring or a 6-membered aromatic ring optionally substituted with 1 to 4 substituents individually selected from R_2 , and fused polyaromatic rings optionally substituted with one or more substituents selected from R_3 wherein R_1 , R_2 and R_3 are individually selected from the group R; and

wherein X is selected from the group consisting of CO, O and S; and

wherein Y is individually selected from the group consisting of CO, O, and S, and Z is selected from CR_8 or N where R_6 , R_7 and R_8 which may be the same or different, are selected from the group R; and

wherein Z is individually selected from the group consisting of CO, O, and S, and Y is selected from CR_{11} or N where R_9 , R_{10} and R_{11} which may be the same or different, are selected from the group R; and

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Q_3 -may be 0, 1 or more than 1 substituents that are individually selected from the group consisting of R_{12} , a fused 5-membered ring or a 6-membered aromatic ring optionally substituted with 1 to 4 substituents individually selected from R_{13} , and fused polyaromatic rings optionally substituted with one or more substituents selected from R_{14} wherein R_{12} , R_{13} and R_{14} are individually selected from the group R; and

R is the group consisting of a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted aralkyl group, a halide atom, a hydroxy group, a substituted or unsubstituted amine group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted thioalkyl group;

wherein the infrared dye absorbs strongly in the near infrared region of the spectrum but poorly in the visible region of the spectrum.

2. (Original) An infrared dye composition comprising a molecule that can be described according to claim 1.
3. (Currently Amended) An infrared absorbing dye composition comprising a molecule ~~in accordance~~ to claim 1 wherein the molecule is substituted with one or more bulky substituents, ~~are utilized~~.
4. (Currently Amended) An infrared absorbing ~~compound molecule~~ according to claim 1 wherein the molecule is substituted with one or more polar groups ~~substituents such as~~ SO_3H , NH_2 and CN ~~are utilized~~.
5. (Original) A solvent-based ink composition comprising a molecule that can be described according to claim 1.
6. (Previously Presented) A solvent-based ink according to claim 5 which is ink jet printer ink.
7. (New) An infrared absorbing molecule according to claim 4, wherein the one or more polar groups are selected from $-SO_3H$, $-NH_2$ and $-CN$.